In the Claims

1. (currently amended)   A   point-to-multipoint   network   arrangement comprising:-

a head-end station;

at least one subscriber station;

a point-to-multipoint network providing shared medium connectivity between each subscriber station and the head-end station;

wherein each subscriber station is arranged to transmit data that has previously been segmented into packet-switched transport protocol packets, to the head-end station, using a time division multiple access protocol, the head-end station being arranged to allocate-having-a number of consecutive time slots-allocated-to each subscriber station, each subscriber station having framing apparatus arranged to insert frame a packet of at least 576 bytes directly without segmentation of the packet, and synchronisation apparatus arranged to send the frame to the head-end station during-into an allocation of consecutive time slots and with a guard band determined without using ranging-without-segmentation-of-the-packet.

2. (original)   A point-to-multipoint network arrangement according to claim 1 in which the packet-switched transport protocol employs packets formatted according to an Ethernet protocol.

3. (original)   A point-to-multipoint network arrangement according to claim 1 in which the packet-switched transport protocol is arranged to carry Internet Protocol data.

4. (original)   A point-to-multipoint network arrangement according to claim 1 in which the packet-switched transport protocol is arranged to carry unsegmented Ethernet frames .

5. (original)   A point-to-multipoint network arrangement according to claim 1 in which the TDMA protocol employs frames each arranged to carry multiple packet-switched transport protocol packets.

6. (original)   A point-to-multipoint network arrangement according to claim 1 in which the at least one subscriber station is arranged to periodically receive synchronisation signals transmitted from the head end-station.

7. (original)   A point-to-multipoint network arrangement according to claim 6 in which differential time delays arising from differing path lengths between the head-end station and outstations are absorbed by including guard bands in the TDMA protocol.

8. (original)   A point-to-multipoint network arrangement according to claim 1 in which the point-to-multipoint network is an optical network.

9. (original)   A point-to-multipoint network according to claim 8 in which the optical network is a passive optical network.

10. (previously presented) A   point-to-multipoint   network   arrangement according to claim 1 in which the point-to-multipoint network is one of a wireless network or a high-speed copper network.

11. (original) A point-to-multipoint network arrangement according to claim 1 in which each subscriber station is allocated to one of a plurality of groups, each group transmitting on a distinct physical channel.

12. (original)   A telecommunications access network comprising a point-to-multipoint network arrangement according to claim 1.

13. (previously presented)   The telecommunications access network of claim 12, the point-to-multipoint network arrangement comprising a passive optical network arrangement.

14. (cancelled)

15. (currently amended)   A head-end station for a point-to-multipoint network comprising at least one subscriber station, and a point-to-multipoint network providing shared medium connectivity between each subscriber station and the head-end station, the head-end station being arranged to allocate a number of consecutive time slots to each subscriber station, sufficient for a frame containing a packet of at least 576 bytes without segmentation of the packet, the head-end station being arranged to receive the frame from the at least one subscriber station, containing data previously segmented into a packet-switched transport protocol packets and transmitted using a time division multiple access protocol with a guard band determined without using ranging having a number of consecutive time slots allocated to each subscriber station, the head end station having apparatus arranged to extract a the packet from the frame of at least 576 bytes from an allocation of consecutive time slots without segmentation of the packet.

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16. (original)   A telecommunications network comprising a head-end station according to claim 15.

17. (currently amended)   A method of operating a point-to-multipoint network arrangement comprising a head-end station, at least one subscriber station, and a point-to-multipoint network providing optical connectivity between each subscriber station and the head-end station, comprising the steps of:

transmitting upstream using a packet-switched transport protocol over a TDMA protocol having a number of consecutive time slots allocated to each subscriber station, and having guard bands determined without using ranging, inserting a packet of at least 576 bytes into a frame directly without segmentation of the packet and sending the frame during an allocation of consecutive time slots without segmentation of the packet.

18. (cancelled)

19. (cancelled)

20. (cancelled)

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